

# VIRGINIA WILDLIFE

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ONE DOLLAR



I listened to a public radio program this morning. It was a report on an elk hunt in Colorado or Montana, I didn't catch which. It was obvious that the reporter was a puzzled urbanite, trying to be objective about the hunt, but having a hard time hiding his innocent anti-hunting sentiments.

"So, why not just walk in the woods and enjoy the scenery?" he asked a hunter from the East Coast who had booked the guided hunt he was covering. "Why do you need to carry a gun?" The reporter wasn't accusing, he just wanted to understand.

Unfortunately, the hunter stumbled over his words, and ended up sounding like the unfeeling man he was not.

"Actually, I hike in the woods alot," the hunter said. "And I wouldn't call myself an avid hunter. I just think that hunting adds an extra dimension to being out in the woods. Besides, it's something that my son and I enjoy doing together."

His words made me wince. I could just picture an anti-hunter sitting grim-faced and listening to this. "Oh, good," I could hear them say. "The man likes to kill things with his son. What a nice 'family' kind of thing to do."

It's strange how words get mixed up coming out, and how easily they can be misunderstood. But, fortunately, this reporter didn't finish his story here. Instead, he continued with interviews from the outfitter's wife-turned-camp cook, who told stories of the outfitters always "forgetting things" and horses that ran home, and then went into a description of the campsite, where "there were guns everywhere." "But," the reporter added, "all were handled safely."

Still, it was an outsider's view. I'll wager that reporter never read *A Sand County Almanac*, any stories by Gordon MacQuarrie or Robert Ruark. I know he didn't see an elk killed on his trip. Plus, he was handicapped with probably only a week to do the story, even though that was probably a whole lot of time the way his producers saw it. He had to rely on what he did see and hear in that short time to give us a picture (all in five minutes or less of radio time)—to make us see—what the tradition of hunting means to a lot of us in 20th century America.

It's a big task, even for the best prepared. So, for him, uninitiated as he was about hunting, it had to be difficult to paint the impartial picture without words fouling up the script. Thus, it struck me as an honest-to-goodness miracle for all of us who hunt that something wonderful happened during this reporter's stay in the wilderness. Because, even if the Eastern hunter didn't have the words to help people understand what makes us hunt, the reporter picked an outfitter who did. And he had the sensitivity to use them. Actually, I bet the outfitter's words startled even the reporter at first, when he said just as calm and unassuming as anything in that cowboy drawl of his, "You know, these woods are sacred to me. That's why I come back to hunt them. And it doesn't matter if I don't get an elk or a deer. It's enough for me to be up here in it all. And when I get up here, it somehow puts things right again, and it always reminds me that life's worth living."

Now, the outfitter didn't get a whole lot into the hunting side of things with those words. He didn't need to. And, I'm not saying that the outfitter's words changed anybody's mind about how they feel about hunting. But it might have changed the way a few people feel about *hunters*. After all, the truth has a way of jolting hatred right out of you sometimes—even when it's only got five minutes to work miracles in.—*Virginia Shepherd*





Briery Creek Lake; photo by Roy Edwards

## Features

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Inside back cover: Boy with dog; photo by William S. Lea.

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# Snakes That Go Bump In The Night

*Snake tales proliferate as fast as good gossip, particularly in places that appreciate good folklore and storytellers. Steve Ausband shares a few of the best ones he's heard.*

by Steve Ausband  
illustrations by Jack Williams

When I was a kid I hit on the idea of becoming a herpetologist. I even learned how to spell it. Actually, I was only lukewarm about amphibians, and most lizards and turtles excited just passing interest, but snakes were objects of endless fascination. As far as I know, I was the only person in the history of our town ever to renew Raymond L. Ditmars' *Reptiles of the World* from our local library three times in a summer. By the age of 12 or so, I could identify every species of snake that a roving gang of pre-adolescents could turn up. I knew more Latin names than Pliny the Elder. Looking back on it, I figure I was probably a pain in the neck.

No doubt much of the fascination came from my understanding that most folks knew virtually nothing about snakes, and many were scared witless of them. Snakes were to be shunned, shot, stoned, or struck with large (and generally very long) sticks. Snake lore, then, became a kind of secret knowledge; nobody else I knew had it, or at least had much of it. Show me a kid who isn't fascinated by esoterica, and I'll show you a stick-in-the-mud. Most of my friends could identify exactly three kinds of snakes: green snakes, black snakes, and "highland moccasins," which were any snakes not green or black. Some of the more sophisticated kids, and quite a few adults, knew not only green and

black snakes, but also king snakes and garter snakes. The rest were all moccasins. Small snakes not clearly identifiable as one of the above were all "baby moccasins."

For a while I kept a collection of snakes—some alive, some dead. The live ones were only periodic visitors, inhabiting for a few days at a time a series of wood-and-wire cages or glass enclosures. The dead ones were kept in sealed jars of rubbing alcohol. (I couldn't get formaldehyde.) At one



time or another, over a course of several years, either resting in cages or lying in state in my house were king snakes, northern water snakes, worm snakes, Dekay's snakes, ring-necked snakes, corn snakes, rat snakes, hognose snakes, rough green snakes, red-belly snakes, and garter snakes. I had a pickled cottonmouth and a very small pigmy rattler in alcohol, both of them from Dare County, N.C. I once helped stuff with cotton and plaster-of-paris a larger timber rattler and a copperhead. They were the lumpiest looking serpents I have ever seen, and they began to smell worse than they looked after just a couple of days.

It was not long before I discovered that collecting snake stories was a lot easier than collecting snakes. In the first place, there are more stories than snakes. In the second place, they don't need cages or jars of alcohol. Finally, you don't have to look for snake stories. You just tell one yourself, and whoever you're talking to will try to tell a better one. I pretty much gave up snake collecting when I was a teenager, but collecting snake stories and wild snake lore is still fun. Here are some old favorites.

We might as well begin with moccasins. "Highland moccasin" is an old term folks still use to describe the copperhead, a near relative of the cottonmouth, or "water moccasin." Both are pit vipers, the young of both species look pretty much alike, and both are, of course, venomous. The cottonmouth has a meaner reputation than its cousin, partly because it is generally larger and somewhat more aggressive than the copperhead. It is a genuinely dangerous reptile. The problem is, *lots* of snakes look enough like one or the other of these two to convince casual observers that the world is overrun with dangerous serpents. Corn snakes, hognose snakes, young rat snakes and young northern water snakes have body markings similar enough to those of copperheads to warrant death by the shovel. Adult northern water snakes and brown water snakes are slaughtered by the thousands each

year by people killing "moccasins."

Copperheads have fairly distinctive hourglass-shaped markings, a pit located midway between eye and nostril, and elliptical pupils. (A snake with round eyes is not a copperhead or "moccasin," regardless of what the hero who has just chopped it up with a hoe has to say about the matter.) Cottonmouths have a darker, drab ground color with nearly indistinguishable bands. They also have pits and ellipti-



Windshield viper

cal pupils, in case you want to look that closely. Copperheads are fairly widely distributed all over Virginia, though in most places they are not nearly as common as the harmless snakes that resemble them. The vast majority of snakes killed as "highland moccasins" simply had the misfortune not to be solid green or black. Cottonmouths, on the other hand, are confined to the southeastern portion of the state. It is difficult to convince folks of this; I know people in the upper Piedmont and mountains who are *sure* that *their* water snakes are "water moccasins." They are not. Nine hundred and ninety-nine times out of a thousand they are northern water snakes. The other time they are something else. They all have round eyes. Flat, triangular heads are not a reliable indicator, since most water snakes and some others can broaden and flatten their heads in a threatening manner.

I had about given up talking about the absence of real cottonmouths from the Piedmont when a man who ran a bait business and raised his own minnows offered to show me a "huge water moccasin." He had a huge snake, all right, but it was not a moccasin. It was trapped in an empty cement tank he had once used for shiners. I said, "Yep; it's a big one," stepped into the tank and pinned the snake with my

boot and a broken shovel handle. Then I picked it up (carefully; they bite hard). "It's a common water snake, though. Look at the belly markings and the eyes." My host, however, was backing toward the door, convinced he was about to see a man die an agonizing death.

One of the best "water moccasin" stories I ever heard came from a man who lives on Turkeycock Mountain, hundreds of miles from the nearest cottonmouth. "Moccasins," he told me, "are much more aggressive than rattlesnakes because so much poison builds up in their heads they have to get some relief."

"I feel just that way myself sometimes," I told him.

"To get relief, they'd rather bite something warm-blooded, like a person, that will draw the poison out. If they can't find anything else to bite, they'll even bite sticks and stuff. You know, you see a lot of dead sticks around a pond in the woods."

Just think of that poor man, wandering through the woods and eyeing dead sticks in the belief that at least some of them were evidence of swollen-headed, ill-tempered, relief-seeking water moccasins. A belief like that could keep you indoors forever.

One of the tales making the rounds a few years ago was about a man who took his son waterskiing, and the boy fell into a nest of water moccasins. By the time the boy was retrieved from the water, snakes covered his body and he was swollen horribly. He died on the spot. I have heard the same story in Virginia, North Carolina, Tennessee, Arkansas, Florida, and Louisiana. Each time, it happened "just a few miles from here." Must have been a bad summer for waterskiers.

Two or three local snake-tale tellers have let me know that, around here at least, copperheads and rattlers are crossbreeding with black snakes, and that the black snakes are now becoming more and more poisonous. Having been nailed by more than one black rat snake back in my collecting days, I am sure glad they didn't start mixing up the gene pool earlier. The most common "black snake" in most of our area is the black rat snake, and, as its name suggests, it is highly beneficial. It is also absolutely non-poisonous.

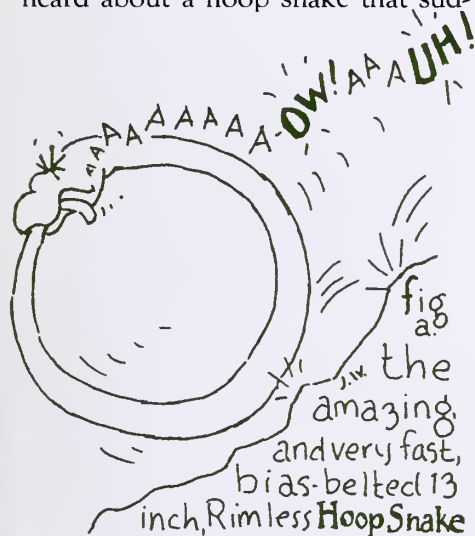
King snakes will eat copperheads and rattlers, just as the old tales say. They will also eat just about anything else they can kill and swallow, including mice, birds, eggs, lizards, and any other snake they come across. King snakes do not actually seek out poisonous snakes as especially spicy treats, but they will eat one if the occasion arises.

"Puffing adders" are not poisonous, and milk snakes do not suck milk from cows. The milk snake, a close relative of the king snake, probably hangs around barns so much because it is looking for mice. How it got the reputation as a milk-sucker I can't imagine. Snakes don't have lips! The dreaded puffing adder or spreading adder is properly known as the hognose snake. It looks dangerous enough—thick body, a color pattern that is superficially similar to that of the timber rattlesnake, and a tendency to spread out its neck (broadening and flattening the head at the same time) and hiss when approached. Curiously, it will actually "play dead" on occasion. In fact, if it is pinned or picked up, it is much more likely to feign death than to bite. Think of it as a sort of reptilian 'possum.





I caught a particularly large, brightly-marked mud snake once in North Carolina, south of the Dismal Swamp. Mud snakes are black with brilliant red or pink bellies flecked with black, and they have red, triangle-shaped bars extending up their sides. They are pretty easy to identify. They also have a tail that ends in a hard, horn-like tip. When first captured, the tip sometimes gets pressed against the captor's skin. It is not sharp enough to penetrate, and it feels a little like being pressed with, say, a Bic ballpoint pen. I suppose this is where the stories of "stinging snakes" come from: snakes with a deadly spine in their tails which they can use as a weapon. Related to stories of "stinging snakes" are the ones about "hoop snakes," which can take tail in mouth and roll downhill. Hoop snakes are supposed to have stingers too, and one man told me he heard about a hoop snake that sud-



denly came out of a roll and stuck its stinger into a tree. The tree later died. That's so impressive it makes the stick-biting moccasins look paltry by comparison.

I stopped at a little Exxon station and general store once on the way to a fishing trip near the spot where I caught the terrible stinging mud snake, and some fellows were sitting around the store swapping snake stories. They eyed the boat and asked where I was going. When I told them, they declared it to be the snakiest place in the world. They were a treasure trove of tales. The most harrowing was by a guy who said he once drove from East Lake to

Manns Harbor on a flat tire because he was afraid to get out and change it. It was at night, you see, and every few yards he travelled he ran over another snake. "It sounded like 'whop-whop, whop-whop, whop-whop,' all the way in," he said. That's a lot of reptiles.

Have you heard that if you kill a poisonous snake, the mate will remain near the body, waiting to get revenge? It's a common belief, and it even shows up in Mark Twain's *Huckleberry Finn*. I doubt that snakes are sophisticated enough to be either vengeful or romantic. Wherever you find one copperhead or rattler, however, is probably a good place to find another, and it surely would not be unusual to see two snakes on two successive days near prime habitat, such as an old slab pile. Furthermore, in certain areas and at certain times of the year, some snakes den together. A person killing one snake there and visiting the site later would be very likely to find another.

Home remedies for snake bites are many. Whiskey (applied both internally and externally), burning gunpowder on the bite, and the application of split chickens are among the ones I have run across. Yep, chickens. I was involved once in a discussion of someone's aunt from Mississippi who died of complications weeks after being bitten by a large rattler in her garden. "They split open live chickens all day long and put them on the bite, but it didn't seem to give her much relief," the tale-teller said. I suppose not. Stories about the efficacy of chicken-splitting or whiskey-drinking as cures may come from the fact that many snakebites are by nonpoisonous snakes. In those cases, chickens do about as well as anything else, and the victim always recovers. In the remote possibility that I am ever tagged by a large rattlesnake or cottonmouth, I will skip the chickens and go for the shot of antivenin. You go to Colonel Sanders if you want to; I'm headed for the hospital.

If we have wild snake stories in this country, just think of what people in other parts of the world have to listen to. I recently heard about mambas in Africa which hunt in pairs; and accord-



ing to my informant, they hunt *natives*.

"What do they do with the native once they get one?" I asked.

"I don't know."

Maybe that's the worst part; maybe *nobody* knows. I mean, think of some poor guy being herded to an unimaginable fate by a pair of snakes! Does it chill the blood, or not?

My own mother, that wonderful person who lived through my snake collecting years with scarcely a murmur of dissent, recently talked with a young man who just got back from a trip up a jungle river in South America. He told her snake stories. "They have snakes down there," she related to me, "that swallow cows."

I once saw a water snake that had swallowed a fair-sized turtle. It had a grotesque, turtle-sized lump in its middle. But a cow! Think of a cow-sized lump. Think of those legs, those knobby cow knees. Think of the enormous girth of a serpent that could ingest a cow. Snakes can't chew, you know, so it would have to be the whole thing or nothing—horns, hooves, cowbell, everything. Now, that's a snake story. I'll have to talk to that guy myself. □

Steve Ausband is the chairman of the English Department of Averett College in Danville, and is a frequent contributor to Virginia Wildlife.

# It's Time to Return to THE NORTH FORK OF THE HOLSTON

*This lovely southwest Virginia river has nearly recovered from three decades of mercury poisoning. It's once again a place of scenic and angling pleasure.*

*story & photos by Bruce Ingram*

In a state that has such a large number of major rivers (the James, New, Shenandoah, and Rappahannock) that are known throughout the South, it's perhaps easy to understand why some of Virginia's so-called "minor" rivers receive so little publicity. It would be easy to understand, that is, if these "secondary" streams were not quality fisheries in their own right.

Some of these waterways, in fact, would be the prime fishing holes in states that are less fortunate than the Old Dominion in terms of angling opportunities. Western Virginia especially has a number of overlooked rivers—streams such as the Clinch, Powell, and the South, Middle, and North Forks of the Holston. The latter stream, in particular, has been ignored, shunned because of the mercury that was discharged into it during the 1950s, 60s and early 70s. However, today the North Fork's pollution problems are largely behind it, and even though the river is still under "catch and release" status, it has a lot to offer.

Bob Cheers, owner of Mountain Sports, Ltd, a sporting goods store in Bristol, is a big fan of the waterway.

"There are so many things that I like about the North Fork," says Cheers. "Its beauty, the good fishing, and the easy canoeing all attract me to the stream. Plus, there are lots of places along the stream where you can beach

a canoe and do some serious wading for bass. The Holston is also a stream that doesn't get a lot of fishing pressure, and most of the time you visit it you can count on lots of action from a variety of species.

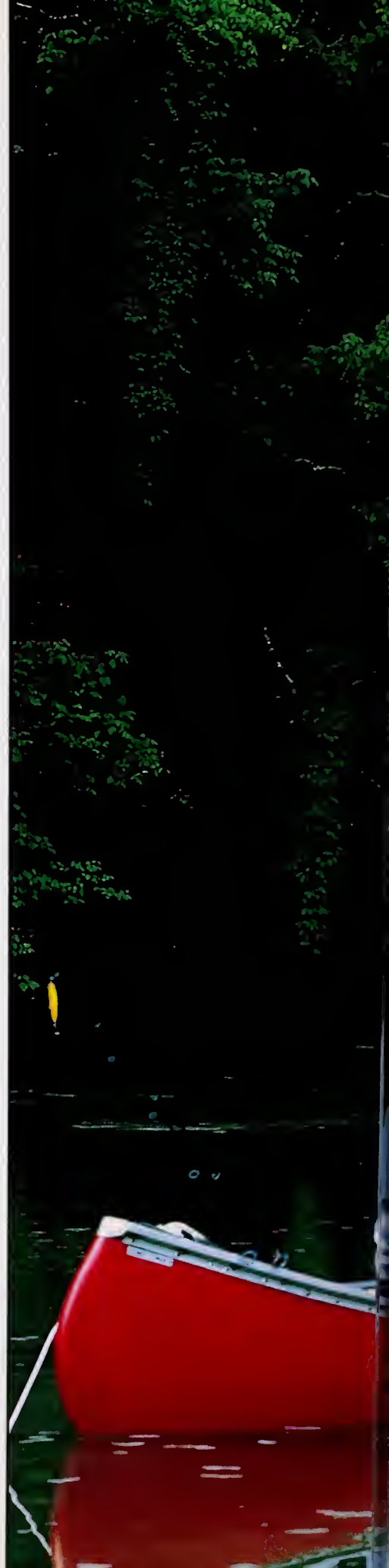
"Of course, smallmouth bass are the main attraction on the North Fork. The smallmouths here have a lot going for them. There's a lot of rocky structure that's conducive to spawning and is also a good form of natural cover.

"In terms of numbers, the smallmouth fishing is some of the best that I have ever seen. There have been days when two or three of us have gotten 150 fish. Most of the smallies are eight to 11 inches long with a nice fish running around 14 inches. And, occasionally, someone will land a four-pound citation."

Not only is the river full of smallmouths, it's close to ideal for float fishing. Largely devoid of major rapids, it consists instead of mostly riffle-pool stretches, making it very convenient for the Virginian who would rather do more casting than paddling while drifting down a waterway.

For lures, 1/4 ounce spinnerbaits with white or chartreuse skirts will take lots of bass. If the river is high or stained, 3/8 ounce spinnerbaits are

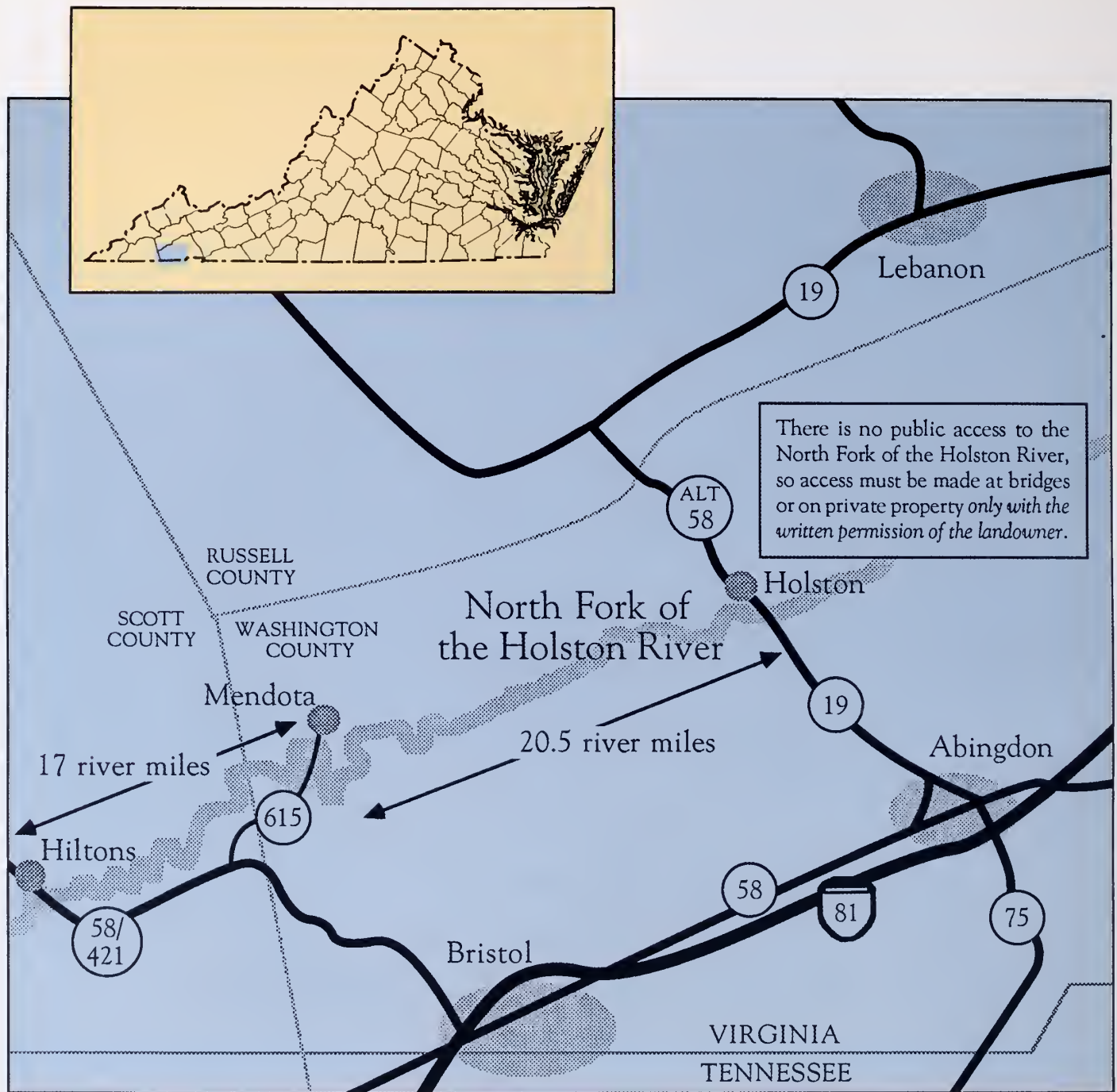
*Right: The North Fork of the Holston is the ideal floatfishing river, with excellent smallmouth fishing and long stretches of flat water.*











effective. Other popular local lures include floating-diving Rebel and Rapala minnows, crayfish-imitating crankbaits, and in-line spinners such as Mepps and Panther Martins. In other words, the same basic lures that work across the state will do well on the North Fork. When Bob Cheers is intent on catching lots of sunfish and redeyes, he opts for the smaller crankbait models such as the ultralight Rebel crawfish. Roostertail spinners in

the 1/8 to 1/16 ounce size will take panfish.

Besides the outstanding fishing, the Holston is worth visiting for its scenery. "Throughout much of the river's length when you come to the outside bends of the stream, you'll find quite a few majestic rock bluffs," says Cheers. "At the foot of those bluffs, you'll usually find some really deep holes, and the water there will be a very beautiful dark green."

"There is one section that is particularly beautiful. It has a rolling Class II rapid bounded by a sheer rock cliff on one side. There are some huge boulders at this section and a dead tree that is still standing. More often than not when we float by, we will see turkey vultures perched on the tree or the boulders. We also frequently see ospreys in this section, and these birds will light on the old tree as well."

Bill Longnecker of Bristol is sim-



ilarly enamoured with the river's charms. "I like to take my two young sons float fishing on the North Fork of the Holston," he says. "Even a fairly inexperienced canoeist should be able to negotiate this river. There's a lot of wildlife along the Holston. And in many places, the trees will stretch and bend their way across the stream and create a canopy effect.

"I wouldn't say the Holston has as spectacular scenery as some streams in the state do, like the New River for example. But the North Fork is a great example of a gentle flowing rural stream that makes its way through woods and fields."

For specific outings, Bob Cheers and Bill Longnecker both favor the stretch of water from Route 19 north of Abingdon to VA 615 at Mendota. They also suggest the stretch from Mendota to Route 58 at Hiltons. The former trip consists of some 20.5 river miles, and the latter approximately 17. All of the land throughout both of these stretches is private, so put-in and take-out must be at the bridges on the aforementioned roads unless the sportsman obtains permission from the landowners beforehand. The Virginia Department of Game and Inland Fisheries has no public access points on the river.

Fortunately, the North Fork's problem with mercury now seems, for the most part, just about over. R.E. Wollitz, a supervising fish biologist for the Game Department, has some good news on that matter.

"Recent data obtained by the State Water Control Board indicates that sunfish now meet the FDA standards for fish consumption and that mercury levels in all species of fish sampled is being reduced," he says. "At the present time the taking of fish for human consumption is banned by the State Health Department. However, the Water Control Board has advised me that if levels of mercury in fish continue to decline, they may recommend that the ban be lifted in the next year or two."

Like Bob Cheers and Bill Longnecker, Wollitz has high praise for the North Fork and considers the stream to have an excellent fishery. This



*The North Fork of the Holston River has been known to give up smallmouth bass in the 2-3 pound range to the lucky angler. Although the taking of fish for eating is still banned, anglers are looking forward to that restriction being lifted sometime in the next few years.*

branch of the Holston may have had its problems in the past, and it may be little known outside of western Virginia. Still, the North Fork of the Holston is a quality stream that offers fine fishing and easy paddling in a beautiful part of Virginia.

For current fishing information on the North Fork of the Holston, contact Moun-

tain Sports, Ltd., 1010 Commonwealth Ave., Bristol VA 24201 (703/466-8988) or Noonie's Taxidermy Studio, Route 4, Box 403, Abingdon, VA 24210 (703/628-6249). □

Bruce Ingram is the Virginia editor for Outdoor Life magazine and a frequent contributor to Virginia Wildlife.







# UNTAMED WATERS OF AN OLD FRONTIER

## The Clinch River

*The Clinch River in southwest Virginia has a long history of Indians and tough frontiersmen. It flows through rough and tumble country, and is untamed still by dams or man. It is a river to delight in.*

*by Bob Gooch*

It's Daniel Boone country it flows through. Yes, rugged mountain country that won the fancy of the early settlers. Hardy men hacked trails through the wilderness here. And they built sturdy log cabins, fought off the Cherokee and Shawnee Indian raids, and fashioned pioneer lives for themselves and their families.

While Patrick Henry was delivering his famous "give me liberty or give me death" speech in Richmond, Daniel Boone and his scouts were exploring the wooded hills that still crowd its banks. ("Somewhere there must be a trail to Kentucky.") And while Thomas Jefferson was kindling his ambitions for stately Monticello, those hardy pioneers were busy chinking their crude log homes against the chilling blasts of the cold Appalachian winters. Advanced civilization came later to southwest Virginia.

It's the Clinch River we're talking about, of course, a river that harbors bone-chilling stories of raw courage and unbelievable hardships. Its drainage system includes some of the most historically colorful and rugged country in Virginia. Daniel Boone even lost a son there. Seventeen-year-old James was killed near its bank by a raiding Shawnee party.

*Opposite: View of the Clinch River at the Craft Mill Bridge (site of the Craft Mill Launch Ramp), taken from Copper Ridge; photo by Roy Edwards. Right: A number of swinging bridges or footbridges span the Clinch River, adding to the charm of this much-loved southwest Virginia river; photo by Bob Gooch.*

Famous trails once forded, and now bridge, the river. To the north there is the legendary Trail of the Lonesome Pine, now U.S. Highway 460, and to the south the famous Wilderness Trail runs west. Modern U.S. 58 follows much of it through the Cumberland Gap into Kentucky.

Today, three southwest Virginia counties share the Clinch River. Russell, Scott, and Tazewell—though it also brushes Wise as it flows southwesterly into Tennessee.

The Clinch forms in Tazewell near the Tennessee Valley Divide. Streams split here, some flowing north and east to the New River and eventually into the Ohio River, while others flow south and west through Kentucky and Tennessee to the Ohio. The Clinch headwaters flow south.

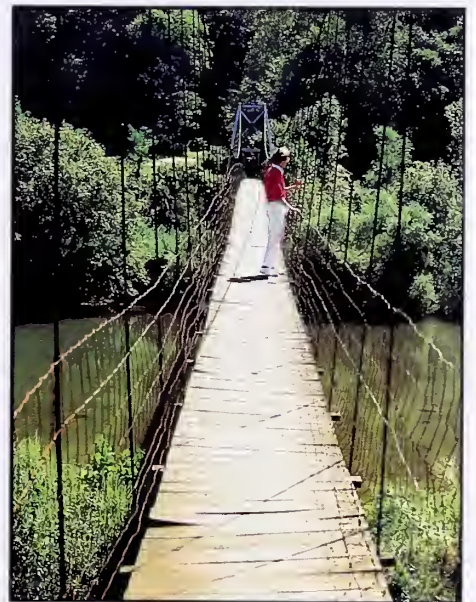
A pair of forks form the headwaters of the Clinch, the North Fork, rising at an elevation of approximately 2,800 feet, and the South Fork at 2,700. Neither the North nor the South Forks, unfortunately, are considered public waters. Both offer fishing for bass, sunfish, trout, and other species, but the permission of the landowner is needed. By declaration of the U.S. Army Corps of Engineers, the main stem of the river is a public waterway downstream Blackford where Virginia Primary Route 80 crosses it.

"There is some doubt about its status upstream from Nash Ford," said Department of Game and Inland Fisheries biologist J.H. Jessee who grew up on the banks of the Clinch River.

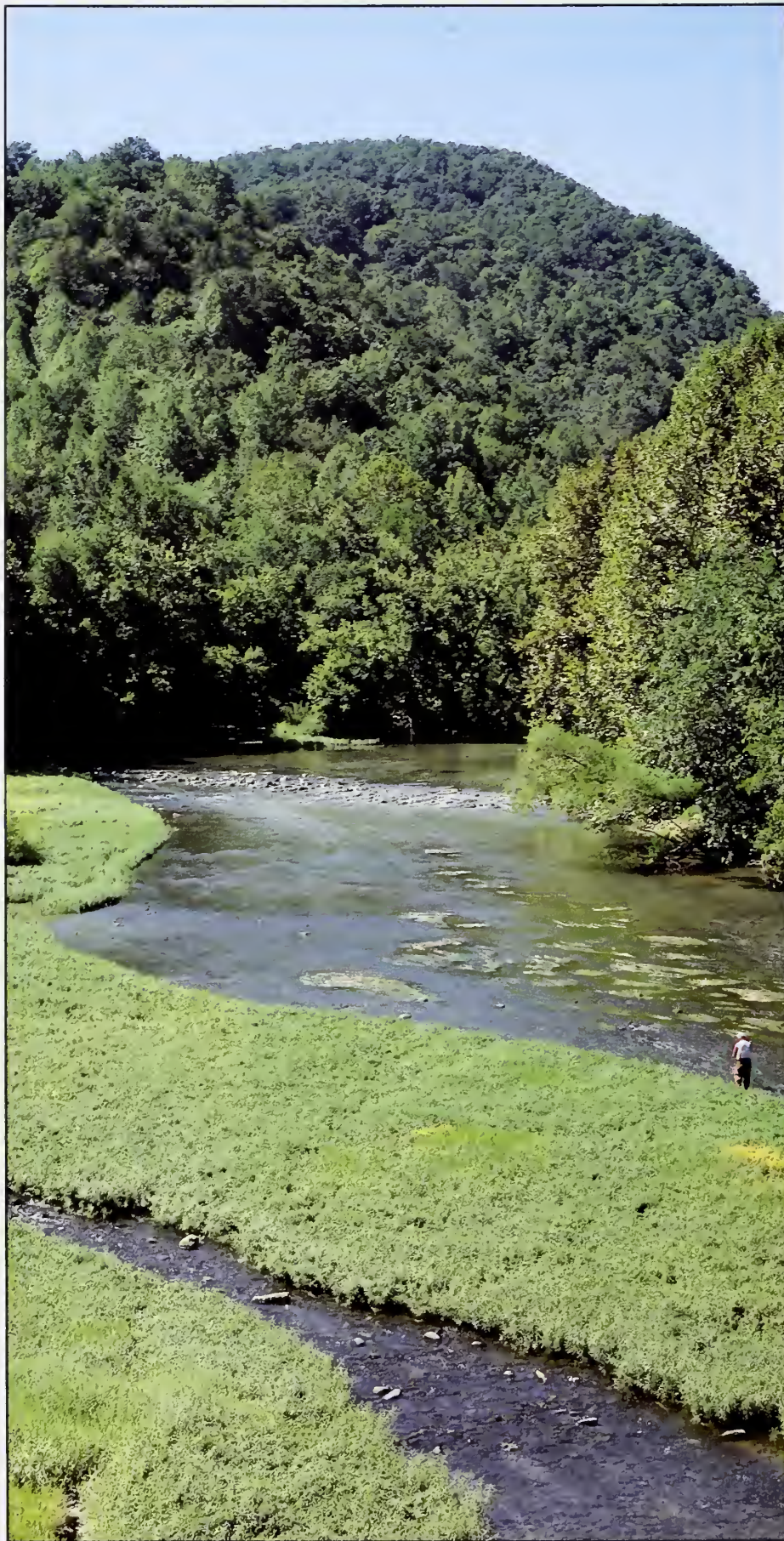
There are public launching ramps at Blackford, Chestnut Ridge, and Nash Ford, however, and anglers fish this section of the river regularly.

The Clinch flows as freely today as it did when Daniel Boone roamed its banks. There are no dams, not even a low-water bridge, to impede its flow. Ledges and shoals? Sure. But they are symbols of a free-flowing river, a rarity in Virginia today.

In addition to the North and South Forks of the Clinch, other major tributaries include the Little River which forms in Tazewell County to join the Clinch just north of Blackford, and Big Cedar Creek and Copper Creek both of which originate in Russell County. Big Cedar Creek enters the Clinch just south of the Chestnut Ridge access







point, and Copper Creek flows through Scott County to meet the Clinch at Speers Ferry in Scott County.

Numerous smaller streams also drain into the Clinch River. This is trout country, and many are trout streams either stocked by the Department of Game and Inland Fisheries or holding wild populations of native brookies. Big Cedar Creek is a trout stream, and in Scott there are Big Stony, Little Stony, and Stock Creek, all stocked with trout.

From the 2,700 to 2,800-foot elevations the Clinch drops between 1,500 and 1,600 feet as it flows into Tennessee at 1,200 feet. Sure, there are riffles and mild rapids, ledges, and plenty of current, but there is little or no really dangerous water. The ledges should be approached with care as there may be a drop of several feet at some of them. There is a good ledge just above the Cleveland access point.

The river's nature belies the rugged country it flows through. Pop over a rise in the highway, view the rugged mountain country suddenly before you, and you picture a river with plenty of white water and challenging rapids for canoeists or rafters. But you won't find it.

Most of the fast water will be encountered upstream between the Blackford and Nash Ford access points, a little less than 20 miles of stream. There are also some good rapids between St. Paul and Dungannon. Approach these stretches of water cautiously, however, keep the bow of your craft downstream, and you won't have any trouble.

The upstream shoals do present a problem in dry weather when the water may be too shallow to float. Then you may have to drag your canoe or john boat.

As you float leisurely down the Clinch River, dipping your paddle occasionally to keep your craft on course or to move more rapidly through a pool of quiet water, you will pass beneath some high bridges. Some

*Flat water and riffle areas make for easy floats and wade-fishing amid the incomparable scenery of southwest Virginia on the Clinch River, one of the state's most treasured rivers; photo by Bob Gooch.*



will be modern concrete structures, others ancient and creaky steel bridges, but the most intriguing will be the picturesque swinging bridges, footbridges that provide easy crossing by pedestrians.

The Clinch River is primarily a canoe or johnboat stream. Shallow riffles and shoals all but rule out larger boats. The access points and launching ramps recognize this. Some of the ramps are nothing more than grassy banks down which you can slide a light craft. Only the access points at Clinchport and Dungannon have concrete ramps. These are downstream where long stretches of quiet water make a larger boat and motor useful.

There are approximately 95 miles of river between the upstream access point at Blackford and the downstream one at State Line, 95 miles of water offering a rich variety of fishing.

Like so many southwest Virginia streams, the smallmouth bass is the

glamour fish, the fish most sought after. The bass fishing is especially good in the upper stretches of the Clinch. The water is shallower there. And faster. Bass like that kind of water.

Clinch River bass anglers are waders, primarily. A few use canoes or johnboats. Except for the formal access points, however, the wading angler may have trouble getting to the stream. Most of the land adjacent to the river is privately owned, and the owner's permission is needed to cross it—even though the river is a public waterway.

Local smallmouth anglers prefer hellgrammites and minnows over artificial lures, but the usual smallmouth lures will produce. Lures such as the Rebel, Rapala, and Tiny Torpedo in small sizes will take bass, and so will the spinner-fly combinations such as the Mepps and Roostertail lures. Fly fishermen score with maribous, mud-

dler minnows, and nymphs.

Bass anglers take several rock bass for every smallmouth, and many anglers fish specifically for the sunfish with the red eyes. Redeye is a popular local name. Taken on light spinning or fly tackle, they are a joy to fish for.

Big muskellunge stocked by the Department of Game and Inland Fisheries create plenty of angling excitement along the river. "One angler I know cuts a notch in a swinging bridge every time he catches a muskie," said J.H. Jessee. "The last time I checked there were over 30 notches in that bridge."

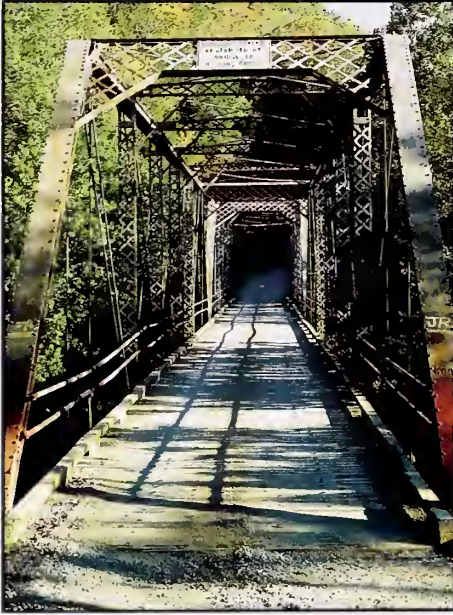
Local muskie fishermen prefer large live minnows, but large plugs will also take these big, exciting fish. The tiger is the predominant muskie stocked in the river.

The Department also stocks wall-eyes and some good catches are reported occasionally. The walleye is a hard fish to find sometimes, but once

*The Clinch River is full of good fishing ledges. Here's one just upstream from the Chestnut Ridge Bridge access and launching area; photo by Bob Gooch.*







*Above: An old steel bridge spans the Clinch River just upstream from the Chestnut Ridge Bridge access and launching area; photo by Bob Gooch.*

located it can be relatively easy to catch. Fishing at night can be productive. A nightcrawler fished behind a spinner is a favorite lure.

Though not considered a game fish, the redhorse sucker is abundant in the Clinch River, and much sought after by local anglers. There are also plenty of channel and flathead catfish for those who like to fish for old whiskers. And downstream there are spotted bass and scattered populations of crappie and largemouth bass.

A spawning run of white bass out of Norris Lake in Tennessee creates some angling excitement every spring. The best fishing is usually found in the Dungannon area. Sauger, known locally as sand pike, were reasonably abundant until they were all but wiped out by a fish kill in the late 1960s. Anglers still take a few of these close relatives of the walleye.

The Clinch River could be one of Virginia's best kept secrets. It was relatively inaccessible until the Department of Game and Inland Fisheries, the Tennessee Valley Authority, and local governments got together a few years ago and built a series of access points and launching ramps.

But it's an easy river to know.

Launch a canoe at one of the convenient access points, let the current pick you up, and float leisurely with the ghosts of Daniel Boone, his son James, the sometimes-friendly Cherokees, and the hostile Shawnees.

The gentle waters of the Clinch knew them all. □

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*Bob Gooch is an outdoor newspaper columnist and author of several books on hunting and fishing. He lives in Troy, near Charlottesville.*

*Below: Many anglers fishing the Clinch show a preference for wading over float fishing. Either way, you can't lose; photo by Ginny Gooch.*





# Clinch River Float Trips

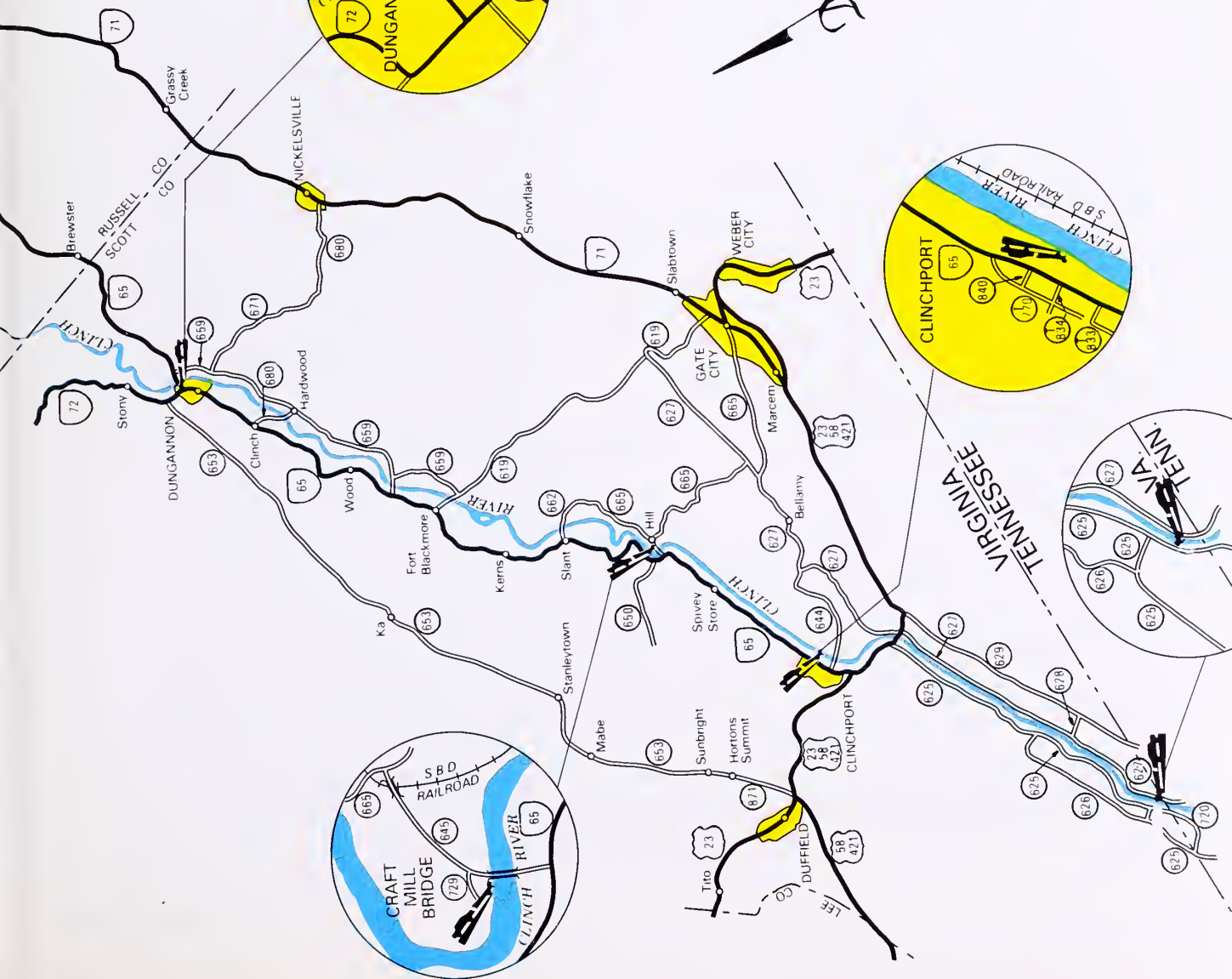
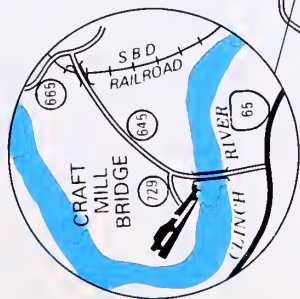
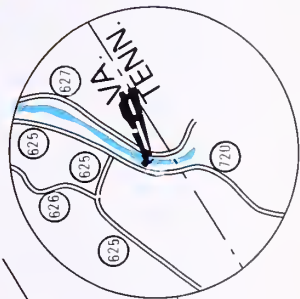
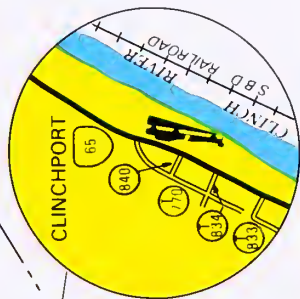
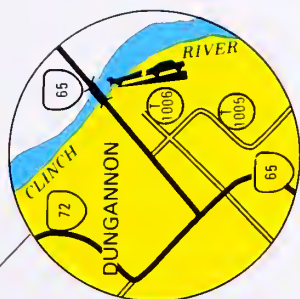
The Department of Game and Inland Fisheries, in cooperation with the Tennessee Valley Authority, Russell and Scott Counties, the Town of St. Paul, and the Lenowisco and Cumberland Plateau Planning District Commissions, has worked hard to provide access on the almost 100 miles between Blackford (Route 80) Bridge and the Tennessee Line for canoeists, kayakers, and johnboaters. This stretch of the Clinch begins in Tazewell County, encompasses sweeping views of the Appalachian Mountains and valleys, and flows through mountain gorges on its way into Tennessee and Norris Reservoir. Fishermen should find some hefty smallmouth and muskies in these waters. In addition, fall and winter duck shooting should not be overlooked, as resident populations of woodies and mallards are readily available. And don't forget the required licenses and life jackets for each person in your boat.



This map illustrates the Clinch River region in Tennessee, showing the river's path through several counties. Key locations and features include:

- Counties:** Jackson, Madison, Hamilton, and parts of Greene, Monroe, and Sevier.
- Towns and Locations:** Honaker, Lebanon, Saint Paul, Bannockburn, and various smaller settlements like Nash Ford, Spring Grove, and Carterton.
- Roads:** Major roads are shown with route numbers (e.g., 80, 19, 640, 645, 661, 664, 665, 614, 615, 63, 612, 58, 719, 709, 798).
- Geographical Features:** The Clinch River is shown flowing through the region, with several inset maps providing detailed views of specific areas:
  - Puckett's Hole:** A detailed view of the river's meandering path near Honaker.
  - Cleveland:** A detailed view of the river's path near Cleveland.
  - Nash Ford:** A detailed view of the river's path near Nash Ford.
  - Blackford:** A detailed view of the river's path near Blackford.
  - Saint Paul:** A detailed view of the river's path near Saint Paul.
- Other Features:** The map includes a scale bar (0 to 10 miles) and a north arrow.





The Clinch River forms in Tazewell County and flows southwesterly through Russell and Scott counties, skirting a corner of Wise. It enters Tennessee from the western corner of Scott County. Listed here are possible float trips with access points highlighted on the accompanying map. **Caution:** Study a topographical map before attempting to float these sections. There are several Class I, II, and III rapids on the upper stretch between Blackford Bridge and Nash Ford. **Remember:** Personal flotation devices are required for each person in any boat, including canoes and kayaks. A state fishing license is also required to fish the river.

*Note: All launch ramps located on map are for canoes or car top boats only except for the ramps at Dungannon and Clinchport.*

**Blackford to Chestnut Ridge Bridge (Route 80 bridge to Route 652 bridge):**  
Put in on west bank of river just upstream from Route 80 bridge. Paddle time: 4 to 5 hours. Distance: 9 miles. Gradient: 17.7 feet per mile. Shoals, ledges, and rocky channel. Very winding. Good ledge just before takeout on right. Chestnut Ridge is also known as Pucketts Hole.

**Chestnut Ridge to Nash Ford (Route 652 bridge to Route 645 bridge):**  
Paddle time: 4-5 hours. Distance: 8.5 miles. Gradient: 14.1 feet per mile. Very winding. Shoals and ledges. Several small islands. Takeout on left.

**Nash Ford to Cleveland (Route 645 bridge to Route 82 bridge):**  
Paddle time: 4-5 hours. Distance: 8.5 miles. Gradient: 6.2 feet per mile. Fast water just downstream from Nash Ford, but thins out quickly. Wide bends in river and islands just downstream from Nash Ford. Takeout on right.

**Cleveland to Carterton (Route 82 bridge to Route 614 bridge):**  
Paddle time: 3-4 hours. Distance: 7.5 miles. Gradient: .7 feet per mile. Islands just below Cleveland. River winds almost back on itself twice just upstream from Carterton. Lots of flat water. Takeout on left.

**Carterton to St. Paul (Route 614 bridge to Route 58 bridge):**  
Paddle time: 4-5 hours. Distance: 9 miles. Gradient: 2.7 feet per mile. Deep curves just below Carterton. Flat water. Takeout on right.

**St. Paul to Dungannon (Route 58 bridge to Route 72 bridge):**  
Paddle time: 8-10 hours. Distance: 18 miles. Gradient: 9.9 feet per mile. Back into fast water, particularly in the gorge and at Burton's Ford. Very winding below St. Paul. Many curves and islands. Takeout on right.

**Dungannon to Hill Station (Route 72 bridge to Route 729 bridge):**  
Paddle time: 8-10 hours. Distance: 18 miles. Gradient: 2.0 feet per mile. Fast water at put in ramp. Small rapids and long stretches of quiet water. Good muskie water. Takeout on left. Hill Station is also known as Craft Mill Bridge.

**Hill Station to Clinchport (Route 729 bridge to Route 65):**  
Paddle time: 2-3 hours. Distance: 5 miles. Gradient: 1.2 feet per mile. Flat water. Wide curves in river just below Hill Station and then straight to Clinchport. Takeout on right.

**Clinchport to Stateline (Route 65 to Route 625):**  
Paddle time: 5-6 hours. Distance: 11 miles. Gradient: 3.1 feet per mile. Curves and islands in river just below Clinchport. Flat water with gentle riffles. Takeout on left.



# Clinch Mountain Wildlife Management Area

**Location:** Occupying parts of four counties (Russell, Smyth, Tazewell and Washington), Clinch Mountain Wildlife Management Area is located along the Appalachian Mountain range in southwest Virginia. Major access to the area is via State Highway 107, from Interstate 81 or U.S. 11, through the town of Saltville to route 634 and across the North Fork Holston River to route 613; then west to route 747 which leads northward into the area along Big Tumbling Creek at the foot of Clinch Mountain; or east on Route 613 to 667 which leads northward to the area at the foot of Flattop Mountain.

**Description:** The area consists of magnificent mountain terrain, along the crests and slopes of Clinch and Flattop Mountains and the steep, narrow valleys of Laurel Bed and Big Tumbling Creeks. Up Laurel Bed Creek, a tributary of Big Tumbling, lies 300-acre Laurel Bed Lake. In general, the topography is steep, rugged, and with almost no flat land except in the vicinity of the lake and near the junction of the two major watercourses. Virgin forest was logged off the area about the turn of the century. Narrow gauge logging railroads were used and traces of the roadbeds remain, in some places now useful for access into the interior high country. Hardwood species are abundant. Stands of hemlock grow along numerous small streams. At the highest elevations there are stands of red spruce more typical of New England and the Canadian life zone than of Virginia. Beaver ponds lend further diversity to the wildlife habitat and virtually every potential beaver colony site is occupied. Management goals are achieved primarily by carefully planned, long range, modified commercial timber harvest rotations. The objective is a perpetual mixture of timber stands of various ages distributed throughout the area to maintain a wide variety of wildlife habitat types and to protect watersheds. Timber and understory species are favored that yield mast crops and available browse, along with den trees and evergreens that provide windbreaks and shelter. Old farm site sod openings are maintained through controlled burning and mowing, to ensure plenty of nesting cover and brooding range. Small mammal populations benefit also, and these in turn support and attract notable predator populations including wintering golden eagles that use the area.

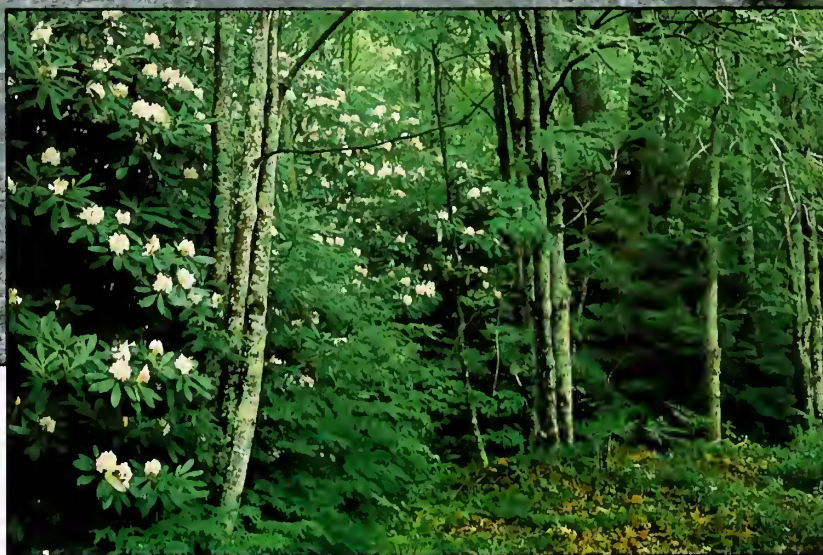
**Hunting:** The deer population on the area is good, and its annual productivity sustains satisfactory harvests. The same is true with respect to the area's wild turkeys. Bears are present on the area, in numbers usually sufficient to permit a short hunting season (see the Department's annual game law digest brochure for Clinch Mountain WMA exceptions to general bear hunting regulations). Grouse populations may fluctuate dramatically over any period of several years but improved brood habitat has raised, in general, fall grouse populations since the area has been under management primarily for wildlife. Rabbit and squirrel populations fluctuate from year to year even more than those of grouse, largely in keeping with variations in annual food supplies (mast crops), especially in the case of squirrels.

**Fishing:** Clinch Mountain is the site of the state's first pay-as-you-go (daily fee) trout fishery. Big Tumbling Creek, Laurel Bed Lake, and Brier Cove are kept heavily stocked during the fee-fishing seasons. Above Laurel Bed Lake the creek offers native brook trout.

**Facilities:** The area is well supplied with roads, marked parking spaces, and trails for hunters, anglers and casual visitors.

**General Information:** The area is a popular attraction for such outdoor recreational activities as horseback riding, hiking, canoeing the main waterways, bird watching and berry picking.

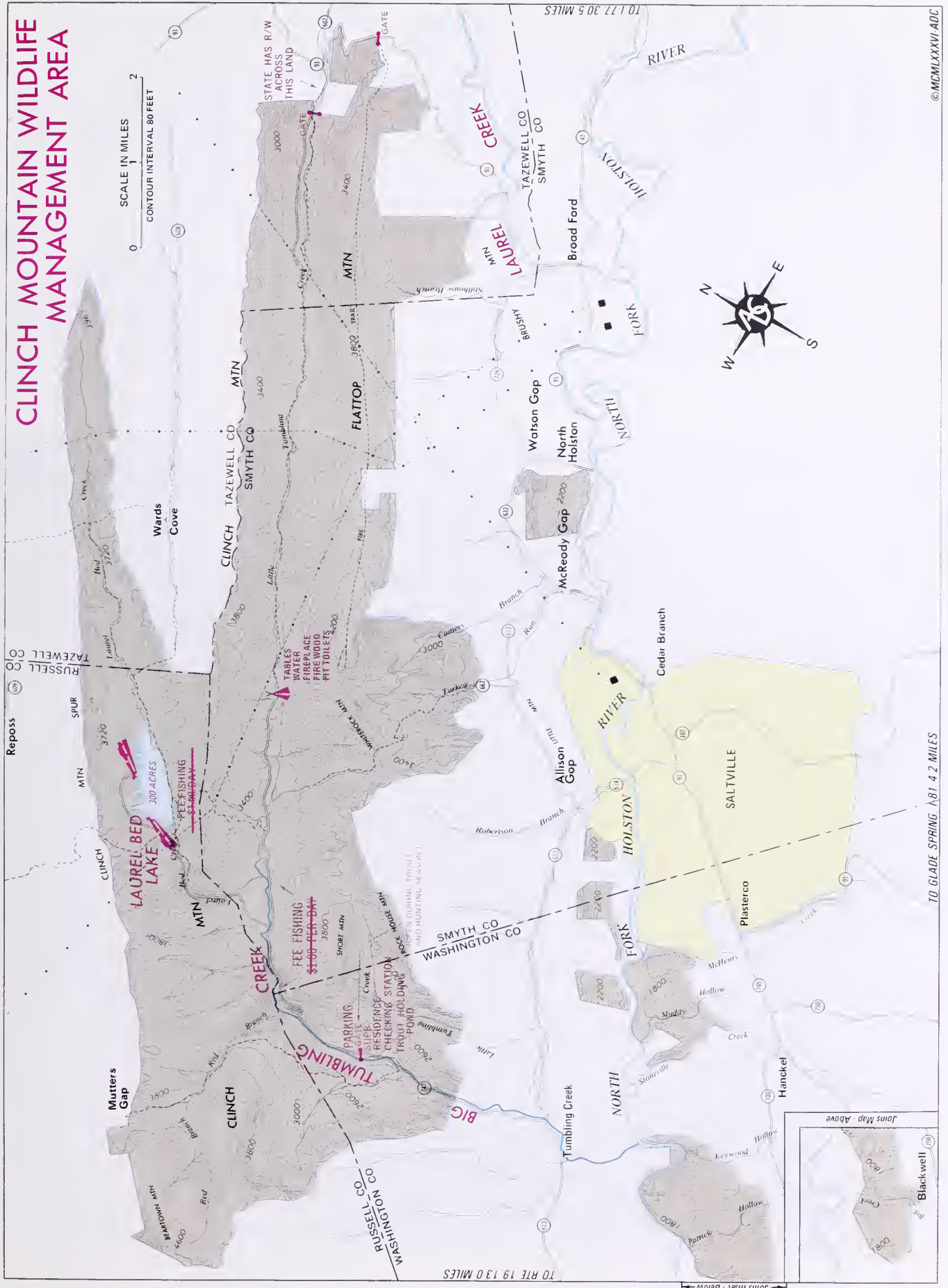




Clinch Mountain Wildlife Management Area in southwest Virginia is known for its rugged mountain terrain, deer and turkey, and grouse hunting—and beautiful scenery; photos by Spike Knuth.



# CLINCH MOUNTAIN WILDLIFE MANAGEMENT AREA





# An Apple A Day Keeps The Pine Vole— **HERE TO STAY**

*Pine voles and apple trees go together in Virginia—but if you're an apple grower, this small mouse's living and eating quarters underneath your apple trees causes economic headaches. Virginia Tech graduate students are trying to find ways for them both to live peaceably together.*



Upon hearing the word "vole," many people conjure up the image of a mole, when in fact, the pine vole (*Microtus pinetorum*) is a type of mouse, that feeds primarily on green vegetation. It's not an insectivore like the mole which eats grubs and worms. Curiously enough, pine voles are rarely found in pine forests. Instead they prefer to live in hardwood areas and fruit orchards.

Pine vole populations skyrocket in commercial apple orchards—perhaps as much as 10 times more pine voles are found there than in other natural habitats. There they burrow around fruit trees and gnaw on tree roots, sometimes to a foot or more below the surface. By girdling the roots of apple trees, they reduce moisture and nutrient movement from the soil to the tree, causing decreased apple production and sometimes killing the tree. In the Eastern and Northeastern United States, pine voles cause an estimated \$50 million annual loss in apple production. In Virginia alone, the decrease in apple production annually for the years 1973-75 has been estimated at \$11 million. When the damage caused by the pine vole is combined with the damage of the closely related meadow vole (*M. pennsylvanicus*), the monetary loss escalates to even higher levels.

Pine voles are really quite handsome with their reddish-brown back, grayish belly, short tail, blunt nose, small ears, and tiny black eyes. These two to four-inch long creatures spend most of their short lives (1 to 2 years) one inch to several feet below the surface of the ground in their tunnel systems and burrows. This is why most people have never seen pine voles, although they may occasionally be seen traveling along their surface runways. Beneath the ground, they are industrious little housekeepers, regularly

cleaning loose soil out of their dark and humble homes. Their nests are made of dry plant stems and leaves and are usually created near tree trunks, putting them in close proximity to tree roots.

To determine vole presence in an apple orchard, there are two good signs to look for beneath trees. One is the presence of small earth piles surrounding holes that are approximately 2 to 3 inches in diameter. These holes are the entrances to their extensive tunnel systems. The second sign is the presence of hollowed shells of fallen, ripe apples. Also, severely damaged trees will have yellowing leaves.

It may at first seem incomprehensible how such small animals can cause so much damage. However, when one considers that voles can reach densities of 300 voles per acre, that females can produce 3-4 litters a year with each litter containing 3-4 young, and that young voles can reach reproductive maturity in 50 to 60 days, their ability to cause extensive damage to trees becomes clear.

Voles live in and reach unnaturally high densities in orchards because of the ideal vole habitat available there. Regular mowing and fertilization of orchards encourages lush root and shoot growth of grasses and weeds near the soil surface, providing abundant food during the growing season which coincides with the vole's breeding and rearing season. Another attraction for pine voles is the abundance of ground litter in orchards. Litter helps maintain the moist soils necessary for the vole's burrowing activities and provides nesting materials.

Pine voles feed on apple tree roots primarily during the winter. Feeding on roots may be due to a decreased supply of favorite foods during this dormant season and not necessarily because roots are a preferred food. Also, apple tree roots contain more sugar and starch during the winter than any other season, possibly making the roots tastier to voles. During the winter, pine voles probably spend more time in or close to their nests to avoid cold temperatures and predators. Since the nests frequently are located near tree trunks, roots are the

nearest source of food through the winter.

During the 1950s and 1960s, pine voles were controlled by spraying endrin, a chlorinated hydrocarbon insecticide, on orchard floors. Endrin, however, is very toxic and persistent, and due to concern about the effects of this chemical on our environment, it has been banned from use. At present, orchardists place anticoagulant baits such as Rozol (chlorophacinone) in vole tunnels usually during the fall when populations are high. The anticoagulant hinders blood clotting, causing voles to hemorrhage when injured either internally or externally. Since voles frequently tear their loose skin during fighting or on sharp objects, Rozol can be a very effective control measure. Some orchardists also have used cultural techniques such as removing vegetation beneath tree canopies alone or in combination with the placement of anticoagulant baits to reduce pine vole populations.

Vole research during the past 10 years at Virginia Polytechnic Institute and State University in Blacksburg has focused on the nutrition, reproduction, and population dynamics of this species in relation to apple tree root damage. The energy requirements of pine voles during the four seasons of the year, diet digestibility, the effect of day length and nutrition on reproduction, and the effect of food supply on the reproductive ability of voles in the wild have been investigated.

The past efforts of researchers have resulted in management recommendations which have substantially reduced vole damage to orchard trees, but there is still a long way to go before the damage they incur reaches acceptable levels. One goal of wildlife researchers at Virginia Tech is to develop ways to reduce damage caused by voles through ways other than killing. Also, wildlife scientists seek ways to control vole populations only where they cause damage to man, and not in natural habitats where they add to the diversity and integrity of the ecosystem. □

Sandra L. MacPherson focused her graduate research on pine voles while pursuing her master's degree in fisheries and wildlife sciences at V.P.I. & S.U.

*Left: The pine vole (Microtus pinetorum) is a native small mammal of Virginia. Although naturally well-adapted to its habitat, this member of the mouse family has taken advantage of the relatively recent proliferation of apple orchards in the state. And, in finding apple tree roots a nutritious new food source, the pine vole is causing apple growers major headaches; photo by Rob Simpson.*









# VIRGINIA'S

GAME DEPARTMENT LAKES—

A · P R O F I L E

## Briery Creek Lake

story by A. L. "Bud" LaRoche

**B**riery Creek Lake is the talk of the angling community these days. Opening last year on January 1, the 845-acre impoundment located within the Department of Game and Inland Fisheries' Briery Creek Wildlife Management Area in Prince Edward County is one of the few reservoirs in the state to be initially stocked with the "big ones," an experimental stocking mix of Florida largemouth bass and northern strain largemouths.

In the spring of 1986, after nearly two decades of planning, the construction of Briery Creek Lake was complete, and Department fisheries biologists stocked the impoundment with 62,100 Florida largemouth bass and 17,500 northern largemouth bass. Additional stockings in 1986 included 31,125 channel catfish, 65,000 redear sunfish, and 65,000 bluegill. The same species were again stocked in 1987 at similar rates; however, the combined sunfish stocking was boosted to 304,000 fish to strengthen the prey population for the bass. In addition, approximately 60 adult crappie were transferred to the lake in 1987 from

Kerr Reservoir. Fish stockings in 1988 and 1989 consisted of 21,000 channel catfish and 275 additional crappie. Future fish stockings will depend on the development of the fishery; however, it is anticipated that only the channel catfish population will require maintenance stockings.

In an effort to provide both habitat diversity and openwater fishing areas within the lake, approximately 50 percent of the lake basin was either cleared or the timber knocked down and drum-chopped. Anglers should be aware that although these drum-chopped areas look clear, there is actually a considerable amount of timber laying on the bottom. Although this underwater structure may make for tough fishing, its purpose is to provide valuable permanent fisheries habitat. The remaining 50 percent of the lake basin was left in standing timber. To provide additional fishing access around the lake, a shoreline access area was cleared at the end of Route 701 on the east side of the lake, and a fishing dike was developed in the vicinity of the dam.

*Opposite: Aerial view of Briery Creek Lake; photo by Lee Walker*

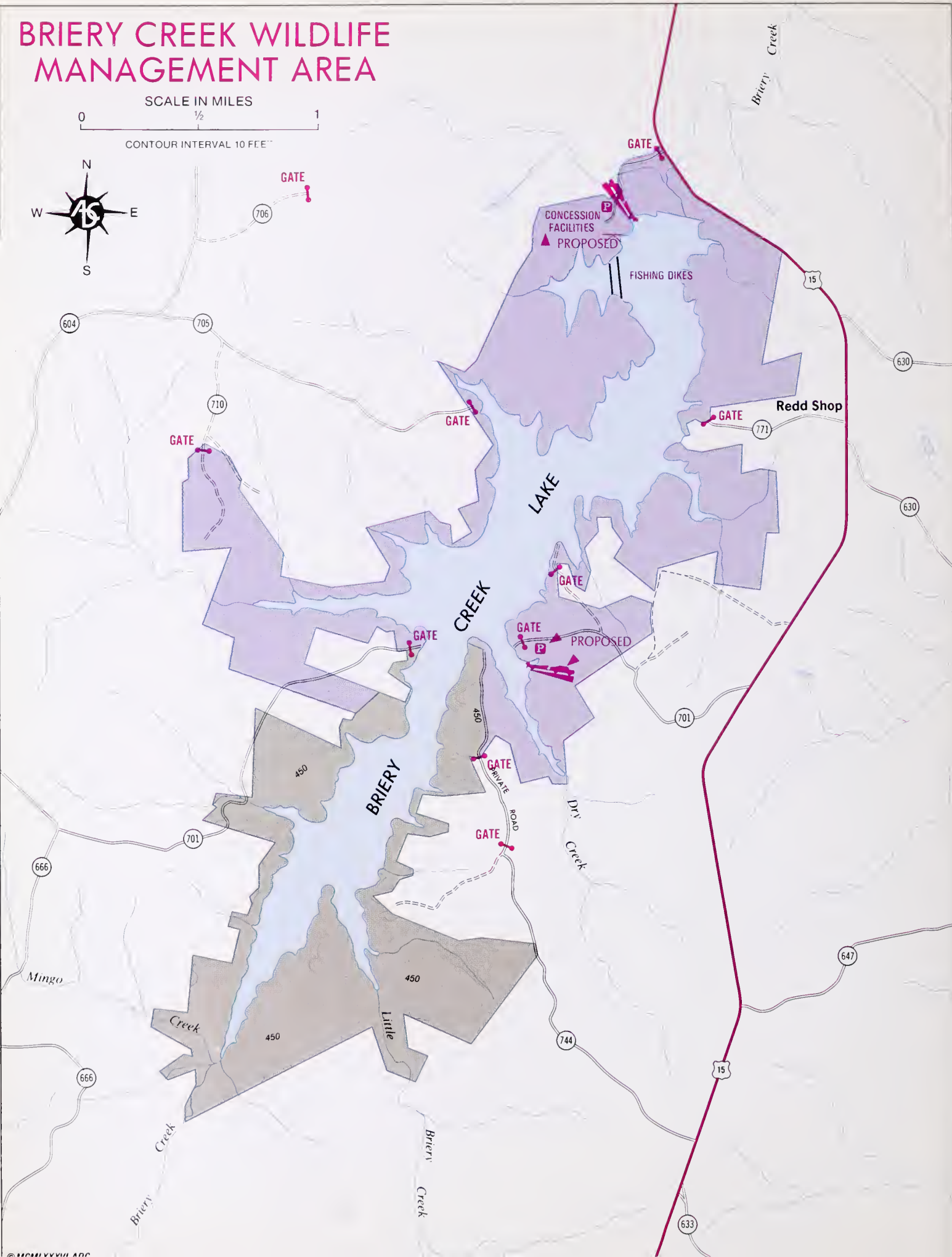


# BRIERY CREEK WILDLIFE MANAGEMENT AREA

SCALE IN MILES

0 1/2 1

CONTOUR INTERVAL 10 FEET



In an effort to determine how successful the Florida/northern strain largemouth bass stocking program has been in Briery Creek Lake, the Department has initiated a two-year cooperative research study with the Department of Fisheries and Wildlife Sciences from V.P.I. & S.U. The study will be completed in June of 1991, and the results of the study will provide biologists with guidance in utilizing these largemouth bass strains in the development of future fisheries resources within the state.

To date, the fish population development in Briery Creek Lake has been very encouraging to biologists. Pre-opening population samples indicated that the largemouth bass population was dominated by fish in the 12-17 inch size range, and some fish as large as 20 inches were captured. Based on the results of these and earlier population samples, biologists proposed a two-year, 18-inch minimum size limit with a daily creel limit of only two bass for the lake, in order to avoid the opening month overharvest which has taken place at other Department lakes in the past. Biologists anticipate that with high angler compliance with these regulations, these restrictive limits will protect the population during a time when the fish are extremely vulnerable to anglers, while ensuring excellent bass fishing at Briery Creek Lake for many years to come.

All indications show that fishing has gotten off to a fast start at the lake. Because of the restrictive size and daily creel limits for largemouth bass, much of the bass fishing has been catch and release. However, a number of bass have been caught in the 4-6 pound range, indicating that growth has been excellent. One encouraging note is that many anglers are having their legal size bass (18-inch minimum size limit) checked by the creel clerk at the boat ramp and then returning their catches to the lake alive. With this type of angler cooperation, Briery Creek Lake should remain one of the state's premier bass fishing hotspots.

Although catch and release bass fishing has been good, it pales next to the success that sunfish anglers have been experiencing. Bluegill and redear



*The largemouth bass fishing in Briery Creek Lake is unbeatable; photo by Roy Edwards.*

sunfish have been averaging 0.5 pounds per fish all year long, meaning that many of the catches have been close to the citation weight of one pound. Additional survey results indicate that anglers are catching channel catfish and chain pickerel in the 3-5 pound range with regularity.

Because the crappie stocking in the lake was delayed to allow the bass population to develop, crappie fishing, as anticipated, has been slow. Anglers should look for the crappie fishing to pick up around 1991 or 1992. A daily creel limit of 50 sunfish and 25 crappie went into effect statewide on January 1, 1990.

Additional regulations enforced at the lake include: a 10 hp maximum on outboard motors, no swimming, no sailboats, no tournament fishing involving prizes, no trotlines, and no trapping except by Department permit. The lake is open to fishing from one hour before sunrise to one hour after sunset.

Briery Creek Lake can be reached by taking U.S. Route 15 south out of Farmville or north out of Keysville. Current facilities available at the lake consist of a temporary parking lot and

gravel boat ramp in the vicinity of the dam off U.S. Route 15. Permanent facilities to be constructed include a primary access area near the dam and a secondary access area at the end of Route 701 off U.S. Route 15 on the east side of the lake. At the primary access site, current plans call for an improved entrance road, improved parking areas, boat ramp, handicapped angler access with facilities, concessionaire with boat rental, and a picnic area. Development at the Route 701 access site will be restricted to a boat ramp, parking lot, and perhaps a picnic area.

The lake promises to maintain its reputation as one of the hottest fishing holes around. Please respect the resource by complying with regulations and controlling litter. As a final word of caution, boaters are reminded that standing timber left in the lake is rotting off at the water line and extreme care should be exercised while using the lake. For more information about the lake, contact Regional Fisheries Supervisor A.L. "Bud" LaRoche at 703/857-7704. □

*A. L. "Bud" LaRoche is a regional fisheries manager with the Department's Fish Division.*



# January Journal

## Nongame Belt Buckles—Free

Get your free pewter belt buckle featuring the nongame and endangered species program logo of a cardinal in a dogwood with a contribution of \$50 or more to the Virginia's Nongame and Endangered Species Program. Order yours now while supplies last by sending your contribution to: Virginia Department of Game and Inland Fisheries, P.O. Box 11104, Richmond, VA 23230-1104. □



## Celebrate Earth Day

photo by Lee Walker



The Virginia Wildlife Federation is selling T-shirts to celebrate the 20th anniversary of Earth Day on April 22, 1990. With the colorful design commissioned by the National Wildlife Federation, the T-shirt sells for \$14, which includes postage and handling.

Order yours in adult sizes: Small (34-36), Medium (38-40), Large (42-44), or X-Large (46-48). Send your check or money order to: Virginia Wildlife Federation, 4602 W. Grove Court, Virginia Beach, VA 23455. Allow 4-6 weeks delivery. □

## Mosquito Zapper

Tired of swatting away mosquitos in the summer? Looking for an alternative to an electronic bug zapper? Why not buy the authentic Jamestown Mosquito Zapper? It's a bird house for bats! The Sheltered Workshop in Farmville is marketing bat houses for \$14.95 apiece, fully assembled, that you can put up on a tree or a building.

Not only is a bat house a wonderful way to give a little habitat back to our wildlife, but did you know that one bat will consume up to 3,000 mosquitos every evening during the summer? That's more than enough reason to put up two or three boxes! In addition, by purchasing this natural, ecologically safe alternative to insecticides and electronic zappers, you'll be helping the employment and training of handicapped people in Southside Virginia. You can't beat it—buy one today! Send your check for \$14.95 for your fully assembled red cedar mosquito zapper or \$9.95 for an unassembled box to: The Sheltered Workshop in Farmville, Inc., Route 2, Box 292, Farmville, VA 23901 □





# Family Outdoors

by Spike Knuth

## The Difference Between A Duck

"What's the difference between a duck?" was a funny little question my dad would ask me when I was a kid. Then he'd answer, "It's got two feet, both the same!" and we'd both laugh and giggle—one of those silly little things that only kids and their parents do and appreciate.

As my interest in birds grew, I often recalled those delightful interactions with my dad on our hiking or fishing outings. I especially think of them when I'm hunting or watching waterfowl, for there truly is a difference in ducks.

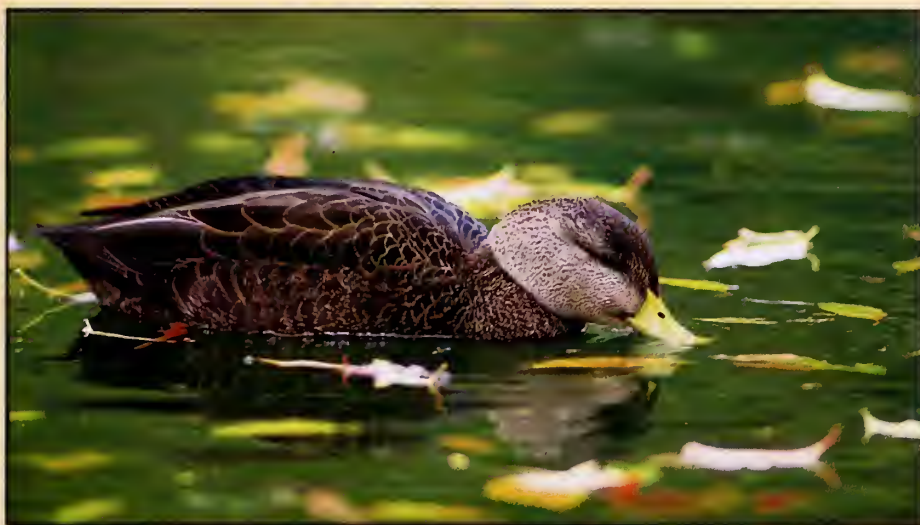
When speaking about ducks a person may refer to them as being "diving" ducks or "dabbling" ducks. When studying the two basic types more closely, we can see that there are some basic differences in each that govern their lives, and that can help us properly identify them.

Dabbling, or puddle or "tippling" ducks as they are often called, are mainly surface feeding ducks that prefer shallower, generally smaller or marshy bodies of water. Frequently they feed off of the bottom by tipping on their heads to reach the bottom. With tails up, they "dabble" with their feet to maintain balance as they feed.

Diving ducks normally inhabit deeper, larger bodies of water and dive for their food of bottom vegetation or shellfish. Some of them, the sea ducks in particular, are capable of diving down nearly 200 feet, but most freshwater divers operate in the seven to 40 foot depths.

The legs and feet of the two types also have some significant differences. For example, on dabbling ducks they are situated in the middle of the body, enabling them to walk about on land with relative ease. Their bodies are held almost parallel to the ground.

Diving ducks, on the other hand have some problem getting around on



*American black duck (Anas rubripes); photo by Rob Simpson.*

dry land because of their legs being located toward the rear of their bodies, which must be held at a 45 degree angle.

The manner of takeoffs and landings of the two types is also different. Dabbling ducks have larger, wider wings and simply fly out of the water by pushing themselves into the air with a downsweep of their wings. Diving ducks have to run over the surface of the water to become airborne and have especially large feet to aid them.

In coloration, the dabbling ducks seem to have the best of it, with the wood duck probably the most notable. Many of the dabblers have a variety of colors that reflect numerous hues and shades. The dabblers all have colored speculums, while the divers' speculums are mostly white or gray.

These are just a few of the basic physical differences that can help in the identification of the different ducks, but there are differences in their habitats as well. Most divers, for example, nest over water while the bulk of the dabblers nest in the grasses away from water.

Diving ducks are faster fliers and even look faster due to their chunkier bodies, narrower wings and quicker wing beats. They generally fly in larger flocks and also raft in large groups on

open water.

However, just to show us that we can't pin Nature down, we find that each species of each type has overlapping traits as well. In the natural world, diversification means perpetuation. The ringneck duck—or ringbill—shows a preference for wooded marshlands or swamps as opposed to open water. The bufflehead can spring into flight like its dabbling duck brethren, although it will use an oncoming wave to give it a boost—a sort of "wave assisted" takeoff!

Gadwalls and most other dabblers—even geese—can make shallow dives and swim underwater but usually do so only when threatened. Goldeneyes and mergansers will nest in tree holes like the wood duck. Black ducks—at home in the marshes—spend considerable time on big water in fall and winter, rafting in large numbers, much like divers.

Without a doubt, our waterfowl are among the most interesting of all birds, and as my dad's little ditty goes, "there is a difference between a duck." Learning these physical differences will help you to better identify them when you see them in the wild. □



# Safety

## Leaks

by William Antozzi, Boating Safety Officer

Fresh water is wonderful. It has low salt content, no calories or fat, and no caffeine. It is great to drink, but when it falls from the sky and finds its way into a boat, there are problems.

Sometimes a leak will develop at one end of a boat and the water flows along, coming out at the other end. The problem here is finding the source of the leak.

I had leaks in my boat cabin and water began flowing into the bilge. Water got into the core material between fiberglass layers and in freezing weather caused the fiberglass to split. I could not find any cracks or other sources. It was a puzzle. I even thought of putting a second layer of fiberglass on both the upper and lower decks. Fortunately, before I did that I found that the "leak" was many leaks—it was all of those hundreds of screws and bolts on every rail stanchion and fitting on the vessel. The old caulking had dried and minute quantities of water were leaking around each screw and bolt. Tiny leaks, yes; but they all added up to a considerable amount. It has been necessary for me to remove each one, force caulking into the screw or bolt hole and replace it. I am only half done with the job, but I already notice a big difference in the amount of water leaking into the boat. The lesson learned?

Whenever a fitting of any kind is fastened to a vessel, the screw or bolt hole must be thoroughly caulked.

Many fiberglass boats have a core material sandwiched between fiberglass layers. Water can get into the core material because of poorly affixed deck fittings and cause core-rot. Leaks into cabins result from improperly bedded portlight frames, leaky hand-rail bases, poorly installed hatches, etc. The result is deteriorating interior wall liners, wet upholstery, wet deck covering and mildew. In cold weather

the water freezes and causes splits, cracks and separations.

Caulking and sealant compounds should be carefully chosen. Silicone is easy to apply and has a fast cure rate, but is not very good for metal deck fittings and cannot be painted because the paint will separate from it in short order. Both polyurethane-silicone and acrylic-silicone are much like plain silicone. They are easy to apply and have a fast cure rate, but can not be painted and are not good for any deck fittings except plastic ones. Polysulfide and polyurethane caulking are fairly easy to apply, are good for most hardware and deck fittings (except that polyurethane is not recommended for deck fittings on teak) and are great for underwater fittings. Neither are good for plastic deck fittings, however, because they attack plastic. Both have good bonding properties and can be sanded and painted.

Sufficient sealant should be applied to any fitting to cause it to squeeze out all around the base when screws or bolts are tightened.

But, when caulking is used, it seems always to get on the person using it along with many other places and things. The best item to use to clean up the mess is mineral spirits such as paint or varnish thinner, if polysulfide or polyurethane is being used. If silicone acrylic sealant is being used, soapy water is best for cleanup. A rag soaked in mineral spirits may be used to smooth a bead of caulking along a seam or crack, if polysulfide or polyurethane is being used.

When drilling holes in a cored laminate the inner surfaces of the holes may first be soaked with a two-part epoxy resin. After that cures, a follow-up with regular sealant is recommended.

A few years ago I found that most of my railing stanchions were bulging. Water was somehow leaking in and freezing, causing the bulges. I solved the problem by drilling holes at the base of each stanchion, permitting the water to drain. This same solution may be applied to other problem areas where water collects. □

## Warden of the Year Named



1989 Game Warden of the Year Steve Vinson (l.) receives congratulations from Col. Gerald Simmons (r.).

Steve Vinson of Pearisburg and Giles County was named the 1989 Warden of the Year.

Vinson's immediate supervisor, Captain Jim Wilson, of Tazewell, says "he is highly respected by his co-workers and the people of Giles County."

Vinson was employed as a game warden in 1972 and assigned to Giles after a short tour in Grayson. A native of Wythe County, he graduated from Virginia Tech, then taught school before being employed as a warden.

"I look at our job as serving," says Vinson. "Working with people" he feels is the most rewarding part of the job. He especially enjoys working with young people and is very active in the Hunter Education Program in the school systems of the county. He also works with local service clubs, sportsman's clubs and other groups in the county.

"I feel we are accomplishing something by enforcing laws to protect our wildlife. I can really get excited about my job, even after 17 years."

Vinson and his wife, Bobbie live in Pearisburg with their two sons and two daughters. □





All parts of the wild cherry (*Prunus serotina*) are valuable food for wildlife; photo by Spike Knuth.

## Wild Cherry

Quick. Name the five most valuable woody plants for wildlife. Oak is easy. Then what?

Oak, pine, blackberry, wild cherry, dogwood; that's the order in which some experts in wildlife food habits rank plants in their value to wildlife. Wild cherry ranks fourth—a high rank for a tree so undervalued in the landscape.

Most people think of the wild cherry as a weed tree because it's so common, so fast growing and so easily spread by birds. Its shape is also shrubbier, it's foliage thinner, than the trees with tall trunks and thick canopies we learned to love in kindergarten. If we notice wild cherries at all it is usually the webs of tent caterpillars or the unattractive abnormalities known as black knot that draw our attention to them. But train your eye to enjoy the airy habit of the wild cherry, watch the birds feast on its fruit, and imagine how much "heavier" the landscape would look

without its delicate foliage, and its hard not to appreciate the wild cherry.

Wild cherry, rum cherry, and black cherry are all common names for this native tree known to botanists as *Prunus serotina*. The genus name places the wild cherry in the company of its relatives the plums, almonds, apricots, and peaches. The species name *serotina* means autumnal and refers to the relatively late maturation of its purplish-black fruit. Native to every county in Virginia, the wild cherry usually grows no taller than 60 feet. (The largest wild cherry in Virginia is 17'1" in circumference and 63 feet tall.) The choke cherry (*Prunus virginiana*), native to western Virginia, is shorter (seldom taller than 30'), shrubbier, and spreads to form thickets by sending out root suckers.

Two of the most distinctive features of cherries are their fragrance and the lenticles on their bark. Scrape the bark off a green cherry twig with your

pocket knife and smell. If it's not the fragrance of cherry cough syrup you smell, try the fragrance of almond extract. The horizontal slits on young cherry bark are also distinctive. They are lenticels or breathing holes. They're present but not so visible in the bark of every tree, and it is through them that the tree takes in the oxygen it needs to live.

Furniture makers love wild cherry for its wood—it's second only to walnut among our native woods in its value to fine furniture makers. It's easy to work, even grained, doesn't warp or split, and takes a finish well. Cherry also makes a great firewood.

In late spring, wild cherry is covered with bottlebrush-shaped clusters of white flowers that are mobbed by insects. As these flowers fade they give off a strong, not altogether pleasant, odor caused by hydrocyanic acid. Hydrocyanic acid is also present in the bark, leaves, and seeds of the cherry, and the plant has been known to poison livestock that fed on its wilted foliage. Children can also be made ill from eating too many cherry pits. The dark pulp of the fruit is safe, however, and it is used in making jellies and in flavoring alcoholic beverages. A favorite drink among the colonists was "cherry bounce" made with wild cherry fruit packed into jars of rum. An extract of wild cherry bark is still used to flavor medicines.

The twigs, foliage, bark, and fruit of the wild cherry are all used as wildlife food. Among the animals using the wild cherry most are deer, chipmunks, black bear, foxes, rabbits, raccoons, and squirrels. The plant is also an important larval food for butterflies, and 33 species of birds use wild cherries as food. Robins, grosbeaks, thrushes, and cedar waxwings are among the wild cherries best customers, and the aerial traffic around a wild cherry with ripening fruit is as busy as O'Hare Airport at rush hour. □



## "Delicious, Nutritious Rabbit"

Whenever I am asked which game animal I most enjoy cooking and eating, my answer is always the same . . . rabbit! There is something about wild rabbit, even its tame relatives, that makes any recipe delicious. Properly prepared, rabbit is flavorful, tender and excellent for you.

The nutritive value of rabbit is greater than beef. For example, 100 grams (about 1/2 cup) of rabbit contains 21 grams of protein and only 129 calories. An equal amount of beef would have just 16.5 grams of protein and 323 calories.

Wild rabbits always require a steam cooking method which will tenderize the meat and keep it from becoming dry. This does not mean you cannot enjoy fried rabbit. It does mean you should parboil it before frying.

### Menu:

Rabbit With Raisin Gravy  
Vegetable Yam Casserole  
Walnut and Blue Cheese Salad  
Chilled Orange Slices in Red Wine  
Butter Cookies

### Rabbit With Raisin Gravy

1 or 2 rabbits, cut in quarters  
1/2 cup vinegar, divided  
2 teaspoons salt  
1 tablespoon minced onion  
4 whole cloves  
2 bay leaves  
1/2 teaspoon allspice  
1/2 cup dark raisins  
1/4 cup brown sugar

Place rabbit pieces in deep pot and cover with cool water. Add 1/4 cup vinegar to water and bring to boil. Let boil for 10 minutes. Throw this water away. Again, cover rabbit with cool water and add 1/4 cup vinegar, 2 teaspoons salt, onion, cloves, allspice and bay leaves. Cook until almost tender and then add raisins and brown sugar.

Continue cooking until rabbit is tender. This will be 1 hour, or possibly longer. Remove rabbit from pot and thicken liquid with a paste of 1/4 cup flour and 1/4 cup water. Replace rabbit in thickened gravy and heat just before serving. Serves 3 to 5.

### Vegetable Yam Casserole

6 medium yams, cooked or canned  
1 small head cauliflower, broken into flowerets and cooked  
2 cups cooked green peas, drained  
3 tablespoons parsley, chopped  
1/2 cup cheddar cheese, grated  
3 tablespoons butter or margarine, melted

Preheat oven to 325 degrees. Arrange yams, cauliflower and peas in greased 1 1/2-quart casserole. Sprinkle with parsley and cheese before adding butter and bake for 25 to 30 minutes. Makes 6 servings.

### Walnut and Blue Cheese Salad

1 small head iceberg lettuce  
1/4 pound blue cheese  
1/2 cup coarsely chopped walnuts  
3 tablespoons lemon juice  
Salt to taste, if desired  
Freshly ground pepper to taste  
6 tablespoons vegetable oil

Cut away and discard the core of the lettuce. Cut lettuce into bite-sized cubes. There should be about 4 cups. Put the lettuce in a large mixing bowl. Cut the cheese into 1-inch cubes. Sprinkle the cheese and walnuts over the lettuce and then sprinkle with lemon juice, salt and pepper. Toss and sprinkle with the oil; toss and serve. Makes 4 servings.

### Chilled Orange Slices in Red Wine

6 large navel oranges, peeled and sliced  
3/4 cup sugar  
1 cup water  
1 cup red table wine  
2 cloves  
1 stick cinnamon  
2 slices lemon

Preheat oven to 400 degrees. Place large size (14 x 20-inch) Oven Cooking Bag in 2-inch deep roasting pan. Remove any seeds from oranges and place slices within bag. Dissolve sugar in water and add wine. Tie cloves, cinnamon and lemon in cheesecloth. Pour wine mixture over orange slices and place spice-filled bag in middle of oven bag. Close oven bag with nylon tie and make 6 1/2-inch slits on top. Cook for 25 minutes. Let mixture cool to room temperature. Refrigerate until very cold. Remove spice bag. Serve this dessert cold. Makes 6 servings.

### Butter Cookies

1/4 pound (1 stick) butter, softened  
3/4 cup sugar  
Yolk of 1 egg—reserve egg white  
1 cup all-purpose flour  
1 teaspoon vanilla  
Chopped pecans or walnuts

Mix butter, sugar, egg yolk, flour and vanilla together and shape into 3 rolls. Wrap rolls in waxed paper and refrigerate overnight. Slice thin and place on lightly buttered cookie sheet. Beat egg white slightly; spread on cookies with finger and sprinkle chopped nuts on top. Bake in a preheated 375 degree oven until lightly browned. □



# Make it a lifetime sport—



## Buy a lifetime hunting or fishing license

You can now purchase a lifetime hunting or fishing license from the Virginia Department of Game and Inland Fisheries for as little as \$250 apiece. Or, buy them both for \$500. It's a great deal, so buy yours now! Contact the Virginia Department of Game and Inland Fisheries, P.O. Box 11104, Richmond, VA 23230-1104 or call 1-800-252-7717 for details.



# How much do they matter?

Many of Virginia's wildlife are in danger. Suffering from habitat loss and the dangers of pollution which threaten their survival, many species in the state are struggling to survive. How much does a northern flying squirrel or peregrine falcon matter to you? Help your Department of Game and Inland Fisheries fund critical research and management programs for the state's nongame and endangered species by contributing to the Nongame and Endangered Species Fund on Line 26A of your state income tax form.

Now, more than ever, we need your help. How much does Virginia's wildlife matter to you?



A Wildlife Education Project

